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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/673,766 | 09/29/2003 | Richard E. Stein | 279.223US2 | 2476 |

7590 11/12/2004

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| EXAMINER | |
|---|---|
| CAO, CHUN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2115 | |

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/673,766 | STEIN ET AL. | |
| | Examiner | Art Unit | |
| | Chun Cao | 2115 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-6 and 8-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,9 and 10* is/are rejected.

7)☒ Claim(s) *4,8 and 11-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

**FINAL REJECTION**

1. Claims 1-6 and 8-20 are presented for examination. Applicant in amendment filed on 10/12/04 cancels claim 7.

2. The text of those applicable section of Title 35, U.S. Code not included in this action can be found in the prior Office Action.

***Terminal Disclaimer***

3. The terminal disclaimer filed on 10/12/04 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US patent no. 6,636,963 has been reviewed and is accepted. The terminal disclaimer has been recorded.

4. The rejection for claims 1-3, 5, 6, 9 and 10 are respectfully maintained to the extended that is applicable to the amended claims and reproduced hereinbelow for applicant's convenience.

5. Claims 1, 3, 5, 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laney et al (Laney), U.S. Patent No. 5,710,930 in view of Davis (Davis), U.S. Patent No. 4,959,774 and Prutchi (Prutchi), U.S. Patent No. 5,578,064.

Laney and Davis are the prior art references cited by applicant.

As to claims 1 and 10, Laney discloses an external programmer [a computer system] comprising:

a processor [22, fig.1; col. 4, lines 9-10]; input and display mean [fig. 1; col. 5, lines 12-25];

a nonvolatile memory for containing executable startup code [col. 1, lines 53-57; col. 4, lines 33-34]; a volatile system memory for containing executable operating system and application software [col. 4, lines 25-29, 33-34]; a nonvolatile image storage medium; a restore routine contained within the nonvolatile memory for transitioning the system from a non-operational state to a target state by restoring a contents of volatile memory and processor registers to a target state in accordance with a target state image contained in the image storage medium and executing the operating system return routine [col. 2, lines 32-40, 56-66; col. 3, lines 31-37].

Laney does not specify disclose that a target state process for moving the external programmer to a desired target state; and a target state image saving routine executable for creating an image of a target state and storing the target state image as a target state data structure and a target state memory image in the image storage medium; and an operation system return routine for returning control of the system to the operating system software after execution of the execution of the target state image saving routine.

Davis discloses a system for continually updating a shadow memory to reflect changes in data stored by the main memory. Davis teaches that a target state process for moving the external programmer to a desired target state [emphasis added, the system 10 entered a standby power mode upon an occurrence of a power outage] [col. 9, lines 29-36]. Davis explicit teaches that a target state image saving routine executable for creating an image of a target state and storing the target state image as a target state data structure and a

target state memory image in the image storage medium [Emphasis add, "since only small portion data is needed to be updated in a shadow memory to reflect the data changes of the main memory, therefore, the image of data is stored as a data structure and a memory image in the shadow memory in order to update quickly"; col. 1, lines 60-68; col. 8, lines 56-62; col. 9, lines 50-60; fig. 4]; and an operation system return routine for returning control of the system to the operating system software after execution of the execution of the target state image saving routine [col. 5, lines 57-59; col. 8, lines 21-44].

Laney and Davis both do not explicitly disclose a telemetry circuitry for communicating with an implantable medical device.

However, a telemetry circuitry for communicating with an implantable medical device that is old and well known in the art. Such as, Prutchi discloses an external programmer communicates with an implantable device via telemetry circuitry [fig. 1; col. 3, line 66-col. 4, line 4].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Laney and Davis and Prutchi because Davis' specific technique of image saving routine would improve the integrity and efficiency of Laney's system to allow dynamically updating an image data to a desired state (such as a standby power mode) and the specific teachings of Prutchi stated above would improve the functionality of Laney to allow Laney's system to communicate with an implantable device as Prutchi teachings.

As per claim 3, Laney discloses the image storage medium is flash ROM memory [col. 4, lines 30-36].

As per claim 5, inherently, Laney discloses the target image contained in the image storage medium includes contents of video memory [col. 3, lines 31-37, 50-58. Since the image contained all contents of memory into the nonvolatile memory before power off, therefore, a content of video memory is stored as well in the image].

As per claim 6, Laney discloses that a startup code in the nonvolatile memory that initializes hardware register with preset value prior to execution of the restore routine [col. 3, lines 34-38; col. 7, lines 8-11].

As the limitations set forth claim 9 directed to implementations implementing the system of claim 1. As discussed above, Laney and Davis and Prutchi teach the system of claim 1. It is for this reason, at the time of the invention, one of ordinary skill in the art would have readily recognized that Laney and Davis and Prutchi may obviously also teach the implementations of the system of claim 1 as set forth in claim 9. Therefore, claim 9 is rejected under the same rationale with respect to claim 1.

6. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laney et al (Laney), U.S. Patent No. 5,710,930 and Davis (Davis), U.S. Patent No. 4,959,774 and Prutchi (Prutchi), U.S. Patent No. 5,578,064 as applied to claim 1 above, and further in view of IBM Technical Disclosure Bulletin, "Hibernating and Resuming using a Compressed Memory Image", vol. 38, No. 8 August 1995, Page 73 (hereinafter, "TDB").

TDB is a prior art reference cited by applicant.

As per claim 2, Laney and Davis and Prutchi fail to teach of comprising a compressed copy of the content of nonvolatile memory in the target state and storing the memory image in volatile memory in a manner that restores the page frames of the target state.

TDB teaches of comprising a compressed copy of the content of nonvolatile memory in the target state [page 73, lines 1-6] and storing the memory image in volatile memory in a manner that restores the page frames of the target state [page 73, lines 15-21]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Laney and Davis and Prutchi and TDB because TDB's specific teachings above would improve performance of Laney's system and allow data storing efficiency in the image storage medium.

***Allowable Subject Matter***

7. Claims 4, 8 and 11-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Applicant's arguments with respect to amended claims 1-6 and 8-20 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's arguments filed on 10/12/2004 have been fully considered but are not persuasive.

10. In the remarks, applicant argued in substance that the prior art of record does not teach or suggest that a system in which a system is moved to a desired target state, the system saves the target state and then leaves the target state, and the system is later restored to the target state.

11. The examiner respectfully submits that applicant's position is not persuasive. David teaches of moving the system to a desired target state, the system saves the target state and then leaves the target state, and the system is later restored to the target state [col. 1, lines 60-68; col. 5, lines 57-59; col. 8, lines 21-44, 56-62; col. 9, lines 29-36, 50-60; fig. 4]. Also see detail rejection of claim 1 above.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

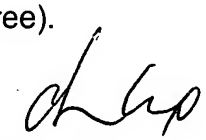
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao whose telephone number is 571-272-3664. The examiner can normally be reached on Monday-Friday from 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chun Cao

Nov. 3, 2004